

CAR FIRES



GOAL

- The firefighter given a fire involving a car will size-up hazards, extinguish the fire and control the scene to the satisfaction of the instructor.

OBJECTIVES

- The firefighter shall be able to state hazards presented by car fires.
- The firefighter shall demonstrate using a 1 $\frac{3}{4}$ inch hose line for extinguishment of the car fire.
- The firefighter shall demonstrate correct positioning of the apparatus.

ICS

- Approach report
 - Size up hazards
 - Is more help needed



FRONT APPROACH

- Position apparatus as far from the front of the involved vehicle as possible 75-100 ft.
- Clear the area of spectators (off duty ff)
- Wear full PPE (*at least one in SCBA*)
- Deploy 1-1 ¾" line using fog pattern
- Pull off and charge back-up line if fully involved or when necessary
- Approach at an angle to the front

FRONT APPROACH

- Locate the fire
- Search for occupants-including trunk
- Cool bumper mounts before working in front of the vehicle or in the engine compartment
- Chock the wheels whenever possible

REAR APPROACH

- Approach at an angle to the rear
- Wear full PPE (*at least 1 in SCBA*)
- Deploy 1-1 ¾" line using fog pattern
- Pull off and charge back-up line if fully involved or when necessary

REAR APPROACH

- Cool the tank
 - Apply fog pattern or puncture trunk with johnson bar
 - Alternatively, bounce a stream off the pavement and onto the tank

The risks involved in approaching a fully or extensively involved vehicle from the rear are great, regardless of safe guards. Since the vehicle is lost anyway, the following procedure should be applied only when necessary to protect persons or combustible materials

OTHER CONSIDERATIONS

- Tank location
- Portable fire extinguishers
- Prepare to use AFFF or other foam on a gas fire, exercise caution when applying a water stream in conjunction with foam

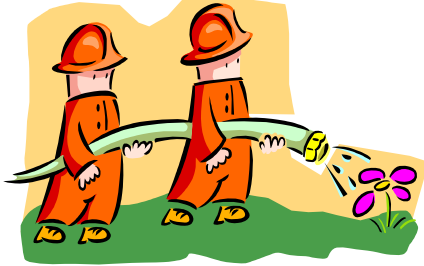
OTHER CONSIDERATIONS

- Do not fill the gas tank with water or puncture the tank to drain it, such procedures will only increase the possibility of a gas spill or fire
- Disconnect the battery, ground cable first, to reduce the danger of a battery explosion

FUEL TANKS

- Metal
 - Puncturing and rupturing
- Plastic & aluminum
 - Melting and burning down if not punctured
- Propane
 - RV's, taxi's, pickup's
 - BLEVE of compressed gases
 - ATC foam carried on all engines (ethanol fuel)

DRIVE SHAFT



- Hollow drive shafts
 - Spun tubing with welded caps on ends
 - Moisture in the tube
 - Expansion when heating from fire may cause explosion like a pipe bomb

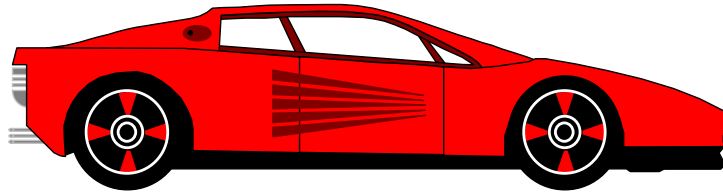
CATALYTIC CONVERTER



- Catalytic converters
 - Provide high heat for ignition
 - Can be heat source for ignition, if car not already burning, cool converter and exhaust system
 - Proper operation 1000 degrees

Catalytic Converts cont.

- Up to 2500 degrees when misfiring
- Under floor-mat the metal is reinforced for insulation, this could be broken down from
- rust or getting in and out which could cause an interior fire. (usually on passenger side)



UNDER THE HOOD

- Metal canister (vapor tank)
 - Holds gas vapors from tank-could BLEVE emitting shrapnel/projectiles
- Battery
 - Disconnect negative first to prevent arcing
- Air conditioner
 - Lines could leak (R-12)-toxic gas potential during a fire

UNDER THE HOOD cont.

- Flammable metals
 - Usually whitish with a popping sound
 - Need for large volumes of water
- Plastics and fiberglass in body parts-PVC gas

BUMPERS

- Shock absorber bumpers
 - When damaged could explode out causing bumper to fly out, during a fire it could shoot out trail of hot hydraulic fluid



HATCH BACKS



- Hatch back vehicles
 - Same problem as bumpers only a smaller cylinder, can explode sooner
- Plastics in dash, seats and wiring can put off PVC gas

PPE/SCBA



- All firefighters must be in full turn out gear
- We recommend a ***minimum*** of one person wearing the SCBA
 - Overhaul of interior and/or under the hood (carbon monoxide)

HYDRANT

- Hydrant line
 - Lay in a 2 ½" or 5" supply if necessary
- Foam
 - Use pre-piped or portable eductor for 1 ¾" hose line





SCENE SAFETY

- IC is responsible for scene safety before, during, and after fire
- Keep bystanders, LPD, off duty ff and anyone else not in full PPE out of area
- All ff must be in full PPE!!!

SCENARIO

- On arrival give size-up report on working tactics
- Lay in supply line
- Apparatus 75-100 feet from vehicle-uphill/upwind if possible
- Fight in full PPE/SCBA
- Advance 1 3/4" line
- Follow charges line
- Officer will assign incoming rigs if any are requested
- Fight extinguish fire starting with ground and then interior of vehicle
- Cool gas tank if necessary
- Search vehicle
- call inspector if needed

Car Fire Skills Checklist

- Name _____
- ID _____
- Rig _____
- Shift _____
- Date _____
- _____
- Officer Signature

Correct size-up/approach report yes _____ no _____

Makes hydrant yes _____ no _____

Correct apparatus position yes _____ no _____

Advance 1 3/4" line yes _____ no _____

Extinguish fire yes _____ no _____

Correct PPE yes _____ no _____

Correct fire attack yes _____ no _____

Scene safety yes _____ no _____